

Remarks

Claims 1, 5-7, 9-13, 15, and 16 remain in this application. No amendments are made. Claims 2-4, 8, 14, and 17-20 are claims canceled in previous amendments.

Response to the Rejection Under 35 §USC 103 (a)

Claims 1, 5-7, 9-13, 15, and 16 were rejected under 35 §USC 103 (a) as obvious over US Patent No. 5,505,946 ('946).

Applicant again asserts that none of the embodiments of '946 teach the claimed invention.

A total of 5 embodiments are outlined in '946 beginning at col. 4, line 46 to col. 5, line 35. In the first 4 embodiments it is necessary to generate either crude BBI concentrate (CBBIC) or a semi-crude BBI concentrate (SCBBIC). The CBBIC or SCBBIC are prepared from hexane defatted soybeans wherein the soy protein is aqueous extracted from the hexane defatted soybeans. Added to this protein extract is an acid that generates a slurry of a soy protein precipitate as a curd. The remaining phase is a liquor that when separated as a centrate, is defined as the acid extracted solubles. Additional water is added to the centrate and the centrate is ultrafiltered to obtain a CBBIC. When the ultrafiltered step is repeated, a SCBBIC is obtained.

In the first embodiment of '946 beginning at col. 4, line 60, added to either the CBBIC or SCBBIC is acetone to produce a BBI precipitate. After settling and decanting, the precipitate is dried, reslurried, filtered and lyophilized to produce a BBI concentrate. In this embodiment, ultrafiltration occurs twice, both times before acetone precipitation.

In the second embodiment of '946 beginning at col. 4, line 66, added to SCBBIC is acetone to produce a BBI precipitate. The BBI precipitate is worked up as per the first embodiment with the exception that the filtered precipitate is spray dried rather than lyophilized. In this embodiment, ultrafiltration occurs twice, both times before acetone precipitation.

In the third embodiment of '946 beginning at col. 4, line 8, CBBIC is prepared. Water is added and the contents are spray dried to produce a BBIC. Ultrafiltration occurs twice but acetone is not employed.

In the fourth embodiment of '946 beginning at col. 4, line 17, SCBBIC is prepared. The contents are spray dried to produce a BBIC. Ultrafiltration occurs twice but acetone is not employed.

In the fifth embodiment of '946, beginning at col. 5, line 22, acid extracted soybean solubles are prepared. Acetone is added to form a precipitate. The precipitate is resuspended in water and centrifuged. Again acetone is added to the second supernatant to again precipitate BBI. The precipitate is dried to produce a BBI product. There are two precipitations with acetone but ultrafiltration is not employed.

Example 7 of '946 is a continuation of the fifth embodiment. After the second acetone precipitation, the undried solids are washed with acetone, the solids are separated and air dried. Thus, there are two precipitations with acetone but ultrafiltration is not employed.

Now compare the '946 teachings to the present claim 1. Acid extracted solubles are prepared. Acetone is added to the acid extracted solubles to form a precipitate. The precipitate is separated and the separated precipitate is washed with acetone to form a washed precipitate. Acetone is removed from the washed precipitate by vacuum filtering to form a vacuum separated precipitate. The vacuum separated precipitate is dissolved in water to form an aqueous solution. The aqueous solution is subjected to ultrafiltration to form a retentate and a permeate. The retentate is dried to form a Bowman-Birk Inhibitor concentrate.

Here are the differences between the present claim 1 and the teachings of '946.

In the present invention, ultrafiltration occurs once, after one acetone precipitation and one acetone wash. In the first and second embodiments of '946, ultrafiltration occurs twice, both times before the single acetone precipitation.

In the present invention, ultrafiltration occurs once, after one acetone precipitation and one acetone wash. In the third embodiment of '946, ultrafiltration occurs twice. Further there is no acetone precipitation.

In the present invention, ultrafiltration occurs once, after one acetone precipitation and one acetone wash. In the fourth embodiment of '946, ultrafiltration occurs three times. Further there is no acetone precipitation.

In the present invention, ultrafiltration occurs once, after one acetone precipitation and one acetone wash. In the fifth embodiment of '946, acetone precipitation occurs twice. Further there is no ultrafiltration.

In the present invention, ultrafiltration occurs once, after one acetone precipitation and one acetone wash. In Example 7 of '946, acetone precipitation occurs twice and there is one acetone wash after the second acetone precipitation. Further there is no ultrafiltration.

Acetone precipitation, acetone wash, and an ultrafiltration of the aqueous acetone washed precipitate, in that order, are the distinguishing characteristics of the present claim 1. Reading the teachings of '946 to arrive at the present claim 1 involves one skilled in the art to attempt numerous combinations and permutations. Should acetone precipitation be employed? If so, when? Should an acetone wash of the precipitate be employed? If so, when? Should ultrafiltration be employed? If so, when? How does rearrangement of any of these steps impact the CI level? The below table compares the CI levels of the present invention and '946.

Example No.	CI level in mg/g
1 (present invention)	252.74
2 (present invention)	390.89
1 ('946)	70.4
2 ('946)	135.5
3 ('946)	261
4 ('946)	99.2
5 ('946)	61.9
6 ('946)	187.8
7 ('946)	200

Of the seven examples of '946, only Example 3 having a CI level of 261 mg/g is higher than the lowest CI level of the present invention (Example 1 at 252.74 mg/g). Example 3 of '946 does not employ acetone for either precipitation or washing. Example 7 of '946 comes closest to the present invention at 200 mg/g CI. Example 7 does not employ ultrafiltration. Given this fact

pattern of '946, one skilled in the art, after reading the teachings of '946, would not modify '946 to arrive at the present invention.

There are only two embodiments within '946 that employ both acetone and ultrafiltration. They are the first and second embodiments. Since these two embodiments have CI levels of 70.4 mg/g and 135.5 mg/g, respectively, one skilled in the art would not look to the teachings of both acetone and ultrafiltration within the same embodiment, as per the present invention.

In order for the Office to show a *prima facie* case of obviousness, M.P.E.P. §2143 requires that the Office must meet three criteria: (1) the prior art reference must teach or suggest all of the claim limitations; (2) there must be some suggestion or motivation, either in the reference itself or in the knowledge generally available to one of ordinary skill in the art, to modify the reference, and (3) there must be some reasonable expectation of success. The Office has clearly failed to meet its burden under (1) and/or (2) above, since the embodiments and the examples of the prior art reference fail to teach or suggest all of the claim limitations of Applicant's claim 1, as amended and further that there is no motivation by one of ordinary skill in the art for employing limitations present in Applicants' claim 1 not present in the prior art reference. Reconsideration and withdrawal of this ground of rejection is respectfully requested.

For the foregoing reasons, it is submitted that the present claims are in condition for allowance. The foregoing remarks are believed to be a full and complete response to the outstanding office action. Therefore favorable reconsideration and allowance are respectfully requested. If for any reason the Examiner believes a telephone conference would expedite the prosecution of this application, it is respectfully requested that she call Applicant's representative at 314.659.3218.

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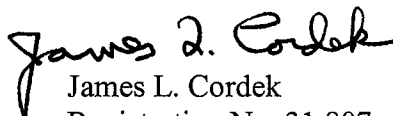
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If any additional fees are due in connection with the filing of this document, the Commissioner is authorized to charge those fees to our Deposit Account No. 50-0421.

Respectfully submitted,

SOLAE, LLC

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